

WARNING

Hazard Statements:

May be harmful if swallowed. May be harmful in contact with skin. May cause an allergic skin reaction. Causes serious eye irritation. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.

291 q/e

291 a/e

18 g/e

Precautionary Statements:

5

GROUP

7: 9/7/2022 - Jan2024

Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles. Wash hands thoroughly after handling. Do not touch eves. Avoid release into the environment.

HERBICIDE

DIRECTIONS FOR USE ENCLOSED Date of Manufacture: Batch Number:



Registration holder: VILLA CROP PROTECTION (PTY) LTD. Co. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630 Tel. (011) 396 2233 Website: www.villacrop.co.za

24 HB EMERGENCY NUMBERS: Griffon Poison Centre: +27 82 446 8946 24 HR Transport / Spill Emergency no: (Hazcall24) +27 86 044 4411 (Client: Villa Crop Protection)

24 months

TERBUSIEN SUPER 600 SC

Reg. No. L 5435 N-AR 1110 / W 130958	Act No. 36 of 1947
HRAC HERBICIDE GROUP CODE: 5	

ACTIVE	INGREDIENTS:	
ACTIVE	INGREDIENTS.	

atrazine (triazine)	291 g/ℓ
terbuthylazine (triazine)	291 g/ℓ
other triazines	18 g/ℓ

Registration holder: VILLA CROP PROTECTION (PTY) LTD. Co. Reg. No. 1992/002474/07 P.O. Box 10413, ASTON MANOR, 1630, Tel. (011) 396 2233

WARNINGS

Withholding periods:

Allow the following number of months between the last application and planting of the cro below:	ops listed
a) Maize and Sugarcane	None
b) Grain Sorghum	12 months
c) Sunflowers, Groundnuts, Soybeans, Potatoes, Dry Beans, Forage Sorghum and Small Grain	18 months

d) All Other Crops (a testing planting is recommended)

Where the rate of **TERBUSIEN SUPER 600 SC** applied does not exceed 1.7 litres per hectare the withholding periods mentioned under (b) and (c) above, could be reduced to 9 months, **except** on the sandy soils of the Northwest Province and North-western Free State, which contain 0 to 10 % clay.

IMPORTANT

The above-mentioned withholding periods are valid only if the correct dosage rate of **TERBUSIEN SUPER 600 SC** according to soil type was applied and normal or above average rainfall occurred, after **TERBUSIEN SUPER 600 SC** application.

Hazard statements:

May be harmful if swallowed.
May be harmful in contact with skin.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

- Handle with care.
- Store under lock and key in a cool, dry, well-ventilated place, away from food, feeds, seed, fertilizers and other agricultural remedies.
- Keep out of reach of children, uninformed persons and animals.
- Product contains Atrazine, which has a high potential for groundwater contamination.
- <u>Re-entry</u>: Do not enter treated area within 1 day after treatment unless wearing protective clothing.
- In case of poisoning call a physician and make this label available to him/her.

Aerial application:

Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray over or allow the drift to contaminate water or adjacent areas.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions. The action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label, the occurrence of resistance of weeds against the remedy concerned, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for lack of performance of the remedy concerned, due to failure of the user to follow the label instructions or to the occurrence of conditions, which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS

Precautionary statements:

Frecautionally statements.
Do not breathe dust, fume, gas, mist, vapours, and spray.
Avoid breathing dust, fumes, mists, gas, vapours, or spray.
Wash hands thoroughly after handling. Do not touch eyes.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release into the environment.
Wear impervious rubber gloves and boots, protective clothing, and chemical safety goggles.
IF SWALLOWED: Get medical help.
IF ON SKIN: Get medical help.
IF ON SKIN: Wash with plenty of water and non-abrasive soap.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy
to do. Continue rinsing.
Get medical help if you feel unwell.
If skin irritation or rash occurs: Get medical help.
If eye irritation persists: Get medical help.
Collect spillage.

Dispose of contents/container in accordance with local regulations.

- Do not eat, drink or smoke while mixing, applying or before washing hands and face or change of clothing.
- Prevent drift onto other crops, grazing, rivers, dams and areas not under treatment or to nearby water sources.
- Do not apply where roots of desirable plants can absorb the chemical.
- Do not mix and load within at least 15 m away, from boreholes, streams, rivers and dams.
- Do not apply within at least 60 m from dams.
- Ensure that no back siphoning to boreholes or dams takes place, where **Atrazine** is applied through the irrigation system.
- Clean applicator before using with other products dispose of wash water where it will not contaminate food, grazing, rivers or dams.
- TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS: Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three (3) times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.
- Destroy the empty container by perforation and flattening and dispose of it in a safe way.
- Never re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

Relevant hazardous components			
Atrazine	291 g/ℓ		
Terbuthylazine	291 g/ℓ		
MEG	< 5 %		
Emulson AG/ISD	< 5 %		
Defomex	< 5 %		
1,2-benzisothiazolin-3-one blend	< 5 %		

SYMPTOMS OF HUMAN POISONING

Acute toxicity to this herbicide is expected to be low and no adverse effects from exposure have been reported. It can be absorbed orally, dermally and by inhalation. Symptoms of poisoning include abdominal pain, diarrhea and vomiting, eye irritation, irritation of mucous membranes and skin irritations.

FIRST AID TREATMENT

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure.

- <u>Skin contact:</u> Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Obtain medical attention if irritation persists.
- <u>Eye contact</u>: Flush eyes with clean water for at least 15 to 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing.
- <u>Ingestion:</u> Seek medical attention or call a poison control centre for treatment advice. Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.
- <u>Inhalation:</u> Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs.

NOTE TO PHYSICIAN

No signs and symptoms of **Triazine** poisoning are known or expected in humans. No specific antidote is available. Treat symptomatically and supportively when required. When large amounts have been ingested, consider gastric lavage or administer activated charcoal.

Mode of Action:

TERBUSIEN SUPER 600 SC contains **Atrazine** and **Terbuthylazine**, both of which are 1,3,5-triazine compound which belongs to HRAC group code 5. Both actives act as a photosynthetic electron transport inhibitor that are used as selective, systemic herbicides. **Atrazine** and **Terbuthylazine** is primarily absorbed by the roots and to some extent the foliage, from where it is translocated acropetally in the xylem and accumulates in the apical meristems and leaves. **TERBUSIEN SUPER 600 SC** is used pre- and post-emergence for the control of grass and broad leaf weeds in a variety of crops.

RESISTANCE WARNING

TERBUSIEN SUPER 600 SC is a group code 5 herbicide. Any weed population may contain individuals naturally resistant to **TERBUSIEN SUPER 600 SC** and other group code 5 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **TERBUSIEN SUPER 600 SC** or any other group code 5 herbicide. To delay herbicide resistance:

- avoid exclusive repeated use of herbicide from the same herbicide group code. Alternate or tank mix with products from different herbicide group codes,
- integrate other control methods (chemical, cultural, biological) into weed control programmes.

For specific information on resistance management contact the registration holder of this product.

USE RESTRICTIONS

- When TERBUSIEN SUPER 600 SC is applied to soils, which expand on wetting and crack or crumble on drying out, such as turf soils, the TERBUSIEN SUPER 600 SC may remain active in the soil for much longer than the above-mentioned waiting periods. Thus, TERBUSIEN SUPER 600 SC should not be used on such soils if sensitive crops might be planted in the foreseeable future. On such soils TERBUSIEN SUPER 600 SC may also give poor control of the weeds, when applied pre-emergence.
- Do not apply TERBUSIEN SUPER 600 SC to inbred parent plants of maize and grain sorghum hybrids or experimental or newly released maize and grain sorghum cultivars without first referring to the distributor or seed supplier.
- If **Paraquat** is added to the spray mixture the following conditions should be avoided:
 - maize under physiological stress,
 - maize with low yield potential,
 - windy conditions and
 - fields with uneven surfaces.
- Under cold and/or very wet conditions **TERBUSIEN SUPER 600 SC** may damage grain sorghum.
- Ensure that sufficient fertilizer is band-placed near the seed at planting, to promote vigorous seedling growth.

DIRECTIONS FOR USE: Use only as directed.

Compatibility:

TERBUSIEN SUPER 600 SC is compatible with Metolachlor 800 EC, Halo 750 WDG/Crown 750 WDG, 2,4-D AMINE 480 SL (L 4505 / W 130459 / N-AR 1096), Cantron[®] 480 SC/Astron[®] 480 SC/Canonne 480 SC, Campatop 225 EC/Bromoxynil 225 EC, Leap 840 EC/Premium 840 EC, Platinum Plus 915 EC/Metolachlor 915 EC, Platinum 960 EC/Metolachlor 960 EC, Nicoron 750 WDG/Nicosulfuron 750 WDG, Bendioxide 480SL/Hornet 480 SL, Acetochlor 900 EC/Premium 900

EC, Laurel 800 WDG/Flumetsulam 800 WDG, Villa 51, Break-Thru[®]/Charge and Summit Super/Benefit Plus as recommended on this label. It is also compatible with other soil insecticides.

- The product may flocculate when tank mixed with **Paraquat**.
- The compatibility of **TERBUSIEN SUPER 600 SC** may be influenced by several factors. As factors influencing compatibility may vary, a physical compatibility test must always be performed before such tank mixture is sprayed.
- When TERBUSIEN SUPER 600 SC is used in conjunction with any other agricultural remedy, all WARNINGS, PRECAUTIONS and DIRECTIONS FOR USE mentioned on that label, must be adhered to.

Mixing instructions:

- Half fill the spray tank with water.
- Add the required amount of **TERBUSIEN SUPER 600 SC** through a 50-mesh sieve to the tank, while agitating.
- Fill the spray tank with water to the required level.
- When TERBUSIEN SUPER 600 SC is tank mixed with other pesticides, the TERBUSIEN SUPER 600 SC should be mixed first using a tank half filled with water and agitated well after which the spray tank should be filled almost to capacity. Only then should the other pesticides and finally the Paraquat be added whilst the spray tank is filled to its final volume.
- Maintain agitation during application.
- Prepared spray mixtures must not be left in the spray tank for any length of time, e.g., overnight.

Application:

TERBUSIEN SUPER 600 SC must be applied before or shortly after weeds emerge. The soil should preferably have a smooth surface, free of large clods.

If dry conditions prevail for a period of 7 to 14 days after application, weeds may emerge and develop. In such cases it is recommended that a light cultivation be carried out with a rotary cultivator to destroy these weeds and to mix the herbicide into the top 10 to 20 mm of soil.

TERBUSIEN SUPER 600 SC can also be applied in a tank mixture with **Paraquat** as a **directed interrow** application. The maize must be at least 30 cm tall to facilitate proper directing of the spray mixture. The weeds should not be taller than 10 cm, to ensure effective control. For further information please consult the **Paraquat** label.

Ground application: Flat fan type spray nozzles:

TERBUSIEN SUPER 600 SC can be applied with any medium or high-volume sprayer, with efficient agitation and which is capable of adequate coverage and even distribution. Best results are obtained using flat fan-type spray nozzles and applying a minimum spray volume of 200 litres per hectare spray mixture.

Aerial application:

Aerial application of **TERBUSIEN SUPER 600 SC** may only be performed by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS Code 10118 (Aerial Application of Agricultural Pesticides). Ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:

- <u>Volume</u>: A spray mixture volume of 30 litres per hectare is recommended. **Pre-emergence** 30 litres per hectare. **Post-emergence** 30 to 35 litres per hectare. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
- <u>Droplet coverage</u>: The following number of droplets per cm² must be recovered at the target area: **Pre**emergence - 20 to 30. **Post-emergence** - 35 to 45.
- <u>Droplet size</u>: The following droplet spectra are recommended: **Pre-emergence** VMD of 350 to 400 micron. **Post-emergence** VMD of 300 to 350 micron. Limit the production of fine droplets less than 150 micron (high drift and evaporation potential) to a minimum.
- <u>Flying height</u>: Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking.
- Use suitable <u>atomising equipment</u> that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.
- Position all the atomisers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the <u>wingtip vortices</u>.

- The difference in <u>temperature</u> between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the <u>wind speed</u> exceeds 15 km per hour.
- Stop spraying under <u>turbulent</u>, unstable and dry conditions during the heat of the day.
- Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80 % and above) may lead to the following:
 - a) reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
 - b) damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
- Ensure that the aerial spray operator knows exactly which fields to spray.

Obtain an assurance from the aerial spray operator that the above requirements will be met, and that relevant data will be compiled in a logbook and kept for future reference.

APPLICATION RATES

MAIZE

1. TERBUSIEN SUPER 600 SC as pre-emergence and early post-emergence.

Table 1: Application rates of TERBUSIEN SUPER 600 SC.

Soil type	% Clay	Overall Application
Light sand / Sand	0 to 10 %	2.0 ℓ / ha
Loamy sand / Sandy loam	11 to 20 %	2.7 ℓ / ha
Sandy clay loam	21 to 30 %	3.3 ℓ / ha
Sandy clay loam / Sandy clay	31 to 40 %	4.0 <i>ℓ</i> / ha
Sandy clay, and soils high in Organic matter	41 to 50 %	4.0 ℓ / ha

TERBUSIEN SUPER 600 SC can only be applied post-emergence if broadleaf weeds have not developed beyond the 4-leaf stage and grasses have not yet emerged. Where grasses have already emerged and broadleaf weeds have developed beyond the 4-leaf stage, these weeds must first be destroyed by cultivation and **TERBUSIEN SUPER 600 SC** then applied onto clean soil. When **TERBUSIEN SUPER 600 SC** is applied post-emergence to the weeds, a suitable surfactant should be added to the spray mixture.

Crop rotation with Triazine sensitive crops:

In the Northwest Province and North-western Free State on 11 to 20 % clay soils where the carry-over effect of **Triazines** to groundnuts or other sensitive crops needs to be avoided, a tank mixture of 1.7 litres per hectare **TERBUSIEN SUPER 600 SC** plus 0.8 litre per hectare **Metolachlor 800 EC** is recommended. On soils with high lime content these rates might however still damage follow-up crops.

2. <u>TERBUSIEN SUPER 600 SC after band treated Metolachlor 800 EC (Northwest Province and North-west Free State only).</u>

To obtain more reliable and longer lasting weed control a band treatment of **Metolachlor 800 EC** is recommended, which is to be followed later by an overall **TERBUSIEN SUPER 600 SC** treatment.

Apply pre-emergence 0.6 litre **Metolachlor 800 EC** per sprayed hectare (i.e., 120 m/ **Metolachlor 800 EC** per planted hectare where a 30 cm band is applied on rows spaced 1.5 m apart) as a band treatment (30 to 45 cm) over the maize rows. After the first cultivation apply **TERBUSIEN SUPER 600 SC** overall at the preemergence recommended rate for the soil type. Add a suitable surfactant to the **TERBUSIEN SUPER 600 SC** spray mixture, to ensure good control of broadleaf weeds on the maize row.

3. <u>Post-emergence application of TERBUSIEN SUPER 600 SC plus Cantron[®] 480 SC plus Villa 51 on maize.</u>

NOTES

- Apply this post-emergence application as follow-up to a pre-emergence application of **Cantron® 480 SC** in tank mixture with **Metolachlor 800 EC** or **Platinum Plus 915 EC** or **Leap 840 EC** as indicated on the registered labels.
- The adjuvant Villa 51 at 0.1 % must be used with all post-emergence applications of TERBUSIEN SUPER 600 SC plus Cantron[®] 480 SC, as indicated on the registered label.
- Apply Cantron[®] 480 SC post-emergence in the 2- to 6-leaf stage for broadleaf weeds, and 2- to 3-leaf stage for grass weeds.
- To improve control of Morning glory and other problem weeds, add 250 m/ **2,4-D Amine 480 SL** to the tank mixtures as listed below.
- Certain weeds may not be controlled effectively at the lower dosage rates.
- Refer to the Cantron[®] 480 SC label for USE RESTRICTIONS and DIRECTIONS FOR USE.

<u>Table 2</u>:

<i>PLUS</i> Cantron [®] 480 SC 210 mℓ/ ha	PLUS Villa 51 (0.1 %)	
WEEDS CONTROLLED		
0	Common name	
Common pigweed		
White goosefoot		
Green goosefoot		
Spindlepod		
Mealie crotalaria		
Large apple thorn		
Hibiscus trionum Bladder weed		
Kenaf		
Common morning glory		
Tall Khaki weed		
	Cantron [®] 480 SC 210 m/ / ha WEEDS CONTROLLED Common pigweed White goosefoot Green goosefoot Green goosefoot Spindlepod Mealie crotalaria Large apple thorn Bladder weed Kenaf Common morning	

TERBUSIEN SUPER 600 SC 600 to 800 m// ha	PLUS Cantron [®] 480 SC 260 mℓ/ ha	PLUS Villa 51 (0.1 %)			
WEEDS CONTROLLED Above-mentioned plus:					
Botanical nam	Botanical name Common name				
Eleusine indica Goose grass					
Xanthium strumarium	Cocklebur				

NOTE - For longer residual control of broadleaf weeds use 1000 m/ TERBUSIEN SUPER 600 SC.

4. <u>Post-emergence application of TERBUSIEN SUPER 600 SC plus Cantron[®] 480 SC plus Villa 51 plus Platinum 960 EC or Acetochlor 900 EC on maize for extended control of annual grass weeds.</u>

NOTES

- Apply this post-emergence application as a follow up to a pre-emergence application of Cantron[®] 480 SC in a tank mixture with Metolachlor 800 EC or Platinum Plus 915 EC or Leap 840 EC as indicated on the registered labels.
- The adjuvant Villa 51 at 0.1 % must be used with all post-emergence applications of Cantron[®] 480 SC plus TERBUSIEN SUPER 600 SC, as indicated on the registered label.

- Apply **Cantron® 480 SC** post-emergence in the 2- to 6-leaf stage for broadleaf weeds, and 2- to 3-leaf stage for grass weeds.
- To improve control of larger broadleaf weeds, Morning glory and other problem weeds add 250 m/ 2,4-D Amine 480 SL to the tank mixtures as listed below.
- Certain weeds may not be controlled effectively at the lower dosage rates.
- Refer to the Cantron[®] 480 SC, Platinum 960 EC or Acetochlor 900 EC labels for a list of additional weeds controlled by these products, as well as for USE RESTRICTIONS and DIRECTIONS FOR USE.

<u>Table 3</u> :				
	PLUS Platinum 960 EC OR Acetochlor 900 EC 630 to 780 m// ha		PLUS	PLUS
TERBUSIEN SUPER 600 SC 600 to 800 m// ha			Cantron[®] 480 SC 210 mℓ/ ha	Villa 51 (0.1 %)
	WEEDS CC	NTROLLE	D	
Botan	ical name		Common name	;
Amaranthus hybridus		Common	pigweed	
Amaranthus hybridus		Common	pigweed	
Bidens bipinnata		Spanish b	lackjack	
Bidens pilosa		Blackjack		
Citrullus lanatus		Bitter apple		
Cleome monophylla	Spindlepod			
Commelina benghalens	Commelina benghalensis		Benghal wandering Jew	
Crotalaria sphaerocarpa		Mealie crotalaria		
Datura ferox	Datura ferox		Large thorn apple	
Datura stramonium		Thorn apple		
Digitaria sanguinalis		Crab fingergrass		
Eleusine indica		Goose grass		
Galinsoga parviflora		Gallant soldier		
Hibiscus trionum		Bladder weed		
Ipomoea purpurea	Ipomoea purpurea		Common morning glory	
Tagetes minuta		Tall Khaki weed		
Tribulus terrestris	Tribulus terrestris		Dubbeltjie	

	PLUS		PLUS	PLUS
TERBUSIEN SUPER 600 SC 600 to 800 m// ha	<i>Platinum 960 EC OR Premium 900 EC</i> 780 m// ha		Cantron[®] 480 SC 260 mℓ/ ha	Villa 51 (0.1 %)
WEEDS CONTROLLED				
Botanical name		Common name		
Chloris virgata		Feathertop Chloris		
Cyperus esculentus			Yellow nutsedge	
Hibiscus cannabinus		Kenaf		
Urochloa panicoides		Herringbone grass		
Xanthium strumariun	anthium strumarium Cod		Cocklebur	
Bidens pilosa		Blackjack		

NOTE - For longer residual control of broadleaf weeds use 1000 m/ TERBUSIEN SUPER 600 SC.

5. <u>Post-emergence application of TERBUSIEN SUPER 600 SC plus Cantron[®] 480 SC plus</u> <u>Campatop 225 EC in maize.</u>

<u>NOTES</u>

• This treatment can be applied as a post-emergence application or as a follow up to a pre-emergence application of Cantron[®] 480 SC in tank mixture with Metolachlor 800 EC or Metolachlor 915 EC/Platinum Plus 915 EC or Leap 840 EC, as indicated on the registered labels.

- Apply Cantron[®] 480 SC post-emergence in the 2- to 6-leaf stage for broadleaf weeds, and 2- to 3-leaf stage for grass weeds.
- **Do not** add **Villa 51** or any other wetting agent to any mixture containing **Bromoxynil**, as this may cause damage to the crop.
- Under certain climatic conditions **Campatop 225 EC** may cause leaf scorch to grain crops. However, yields will not be affected.
- Refer to the **Campatop 225 EC** and **Cantron® 480 SC** labels for a list of additional weeds controlled by this product, as well as for **USE RESTRICTIONS** and **DIRECTIONS FOR USE**.

Table 4:

TERBUSIEN SUPER 600 SC	PLUS		PLUS	
600 to 800 m/ ha	Campatop 225 EC		Cantron [®] 480 SC	
000 10 800 mz/ na	500 to 7	'50 mℓ/ ha	210 to 260 mℓ/ ha	
	WEEDS CON	ITROLLED		
Botanical name		Common name		
Acanthosperpum hispidium		Upright starbur		
Amaranthus hybridus		Common pigweed		
Bidens pilosa		Common blackjacl	K	
Chenopodium album		White goosefoot		
Commelina benghalensis		Wandering jew		
Datura ferox		Large thorn apple		
Galinsoga parviflora	Galinsoga parviflora		Gallant soldier	
Portulaca oleracea		Purslane		
Richardia brasiliensis		Mexican Richardia	l	
Tagetes minuta		Tall Khaki weed		
Xanthium strumarium*		Cocklebur		

* Only at highest recommended dosage rates.

NOTE - For longer residual control of broadleaf weeds use 1000 m/ TERBUSIEN SUPER 600 SC.

6. <u>Post-emergence application of TERBUSIEN SUPER 600 SC plus Cantron[®] 480 SC plus</u> <u>Campatop 225 EC plus Platinum 960 EC in maize.</u>

NOTES

- This treatment can be applied as a post-emergence application or as a follow up to a pre-emergence application of Cantron[®] 480 SC in a tank mixture with Metolachlor 800 EC or Platinum 915 EC or Leap 840 EC, as indicated on the registered labels.
- Apply Cantron[®] 480 SC post-emergence in the 2- to 6-leaf stage for broadleaf weeds, and 2- to 3-leaf stage for grass weeds.
- **Do not** add **Villa 51** or any other wetting agent to any mixture containing **Campatop 225 EC** as this may cause damage to the crop.
- Refer to the **Platinum 915 EC**, **Campatop 225 EC** and **Cantron® 480 SC** labels for a list of additional weeds controlled by these products, as well as for **USE RESTRICTIONS** and **DIRECTIONS FOR USE**.

Table 5:

<u>i adle 5</u> :				
TERBUSIEN	PLUS	PLUS	PLUS	
SUPER 600 SC	Platinum 960 EC	Campatop 225 EC	C Cantron [®] 480 SC	
600 to 800 mℓ/ ha	600 to 800 mℓ/ ha	500 mℓ/ ha	210 to 260 mℓ/ ha	
	WEED	S CONTROLLED:	·	
Bo	otanical name		Common name	
Acanthosperpum his	pidium	Upright starbu	ur	
Amaranthus hybridus	5	Common pigv	weed	
Bidens pilosa		Common blac	Common blackjack	
Chenopodium album		White goosef	White goosefoot	
Commelina benghalensis		Wandering je	Wandering jew	
Cyperus esculentus*		Yellow nutsed	Yellow nutsedge	
Digitaria sanguinalis		Crab finger g	Crab finger grass	
Datura ferox		Large thorn a	Large thorn apple	
Eleusine indica (africana)		Goose grass		
Galinsoga parviflora		Gallant soldie	Gallant soldier	
Richardia brasiliensis		Mexican Rich	Mexican Richardia	
Tagetes minuta		Tall Khaki we	Tall Khaki weed	
Urochloa panicoides		Herringbone	Herringbone grass / garden urochloa	
Xanthium strumarium*		Cocklebur*	Cocklebur*	
Only at high act recen	amondod dooogo ratoo			

* Only at highest recommended dosage rates.

NOTE - For longer residual control of broadleaf weeds use 1000 m/ **TERBUSIEN SUPER 600 SC**.

7. <u>Post-emergence application of TERBUSIEN SUPER 600 SC plus Nicoron 750 WDG plus</u> <u>Cantron[®] 480 SC plus Villa 51 for control of Sorghum species and certain broadleaf weeds in</u> <u>maize.</u>

NOTES

- This treatment can be applied as a stand-alone post-emergence application or as a follow up to a preemergence application of Cantron[®] 480 SC in tank mixture with Metolachlor 800 EC or Platinum Plus 915 EC or Leap 840 EC as indicated on the registered labels.
- The adjuvant Villa 51 at 0.1 % must be used with all post-emergence applications of Cantron[®] 480 SC plus Nicoron 750 WDG, as indicated on the registered label.
- This mixture cannot be applied by means of aerial application.
- Apply with dropped nozzles (directed spray) in order to avoid spraying directly into plant funnel and to ensure that the weeds are not shielded from the spray by the crop's leaves.
- Refer to the Nicoron 750 WDG and Cantron[®] 480 SC labels for a complete list of weeds controlled by Nicoron 750 WDG.
- Adhere to all USE RESTRICTIONS and DIRECTIONS FOR USE as indicated on the Nicoron 750 WDG and Cantron[®] 480 SC label.

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TERBUSIEN SUPER 600 SC	PLUS	PLUS	PLUS		
600 to 800 m// ha	Nicoron 750 WDG	Cantron [®] 480 SC	Villa 51		
600 10 800 m²/ na	60 g / ha	210 to 260 mℓ/ ha	(0.1 %)		
	WEEDS NORMALLY CONTROLLED				
From s	eedling (1 to 2 leaves) to st	age as indicated.			
Botanical name	Common n	iame we	ximum size of eds at time of application		
	Grasses:				
Panicum schinzii	Sweet buffalo grass	Up	to tillering stage		
Setaria pallide-fusca	Red bristle grass	U	Jp to 4 leaves		
	Broadleaf weeds				
Acanthospermum hispidum	Upright starbur		6 leaf		
Amaranthus hybridus	Common pigweed		4 leaves		
Amaranthus thunbergii	Red pigweed		4 leaves		
Amaranthus deflexus	Perennial pigweed		4 leaves		
Bidens pilosa	Common blackjack		6 leaf		
Cleome monophylla	Spindlepod		6 leaves		
Commelina benghalensis	Wandering Jew		6 leaf		
Datura ferox	Large thorn apple		3 leaves		
Datura stramonium	Thorn apple		4 leaves		
Galinsoga parvilfora	Gallant soldier		6 leaf		
Portulaca oleracea	Purslane		6 leaf		
Richardia brasiliensis	Tropical Richardia		6 leaf		
Schkuhria pinnata	Dwarf marigold		3 leaves		
Tagetes minuta	Tall khakiweed		4 leaves		
Tribulus terrestris	Common dubbeltjie		4 leaves		
Xanthium strumarium*	Cocklebur		6 leaf		
Sorghum species:					
Sorghum bicolor	Wild grain sorghum		Jp to 7 leaves		
Sorghum halepense	Johnson grass	U	Jp to 7 leaves		

Only at highest recommended dosage rates.

NOTE - For longer residual control of broadleaf weeds use 1000 m/ **TERBUSIEN SUPER 600 SC**.

8. <u>Post-emergence application of TERBUSIEN SUPER 600 SC plus Cantron[®] 480 SC plus Halo 750 WDG, plus Villa 51 or Summit Super for the control of Yellow and Purple nutsedge and certain broadleaf weeds in maize.</u>

<u>NOTES</u>

- Apply this post-emergence application as a follow up to a pre-emergence application of Cantron[®] 480 SC in tank mixture with Metolachlor 800 EC or Platinum Plus 915 EC or Leap 840 EC as indicated on the registered labels.
- The adjuvant Villa 51 or Summit Super must be used with all post-emergence applications of TERBUSIEN SUPER 600 SC plus Cantron[®] 480 SC plus Halo 750 WDG as indicated on the registered product labels.
- For optimum control of Nutsedge, apply **TERBUSIEN SUPER 600 SC** plus **Cantron® 480 SC** plus **Halo 750 WDG** on actively growing Nutsedge under moist conditions, 3 to 5 weeks after planting. Ensure that the application is made after the majority of the Nutsedges have germinated but before flowering. New germination of Nutsedge may occur if application was performed too early. Later applications, when the Nutsedge is in flower, will also give sub-optimal results.
- Refer to the Halo 750 WDG and Cantron[®] 480 SC labels for USE RESTRICTIONS and DIRECTIONS FOR USE.

Table 7:

	PLUS		PLUS	PLUS
TERBUSIEN SUPER 600 SC 600 to 800 m// ha	Halo 750 WDG 50 g / ha		Cantron[®] 480 SC 210 to 260 mℓ/ ha	Villa 51 0.1 % OR Summit Super 0.15 to 0.3 %
	VEEDS ARE NORMALLY CON AB	OVE:	D AT THE DUSAGE RAT	E AS INDICATED
Bota	anical name		Common name	
Acanthospermum his		Upright s	tarbur	
Amaranthus hybridus		Common pigweed		
Amaranthus spinosus		Thorny pigweed		
Bidens pilosa		Common blackjack		
Cleome monophylla		Single leaved cleome		
Chenopodium album		White goosefoot		
Chenopodium carinatum		Green goosefoot		
Commelina benghalensis		Wandering Jew		
Cyperus esculentus*		Yellow nutsedge		
Cyperus rotundus*		Purple nutsedge		
Datura ferox		Large thorn apple		
Galinsoga parviflora		Gallant soldier		
Ipomoea purpurea		Common morning glory		
Portulaca oleracea		Purslane		
Richardia brasiliensis		Tropical Richardia		
Tribulus terrestris		Dubbeltjie / Devil's thorn		
Xanthium strumarium	1*	Cocklebur		

Only at highest recommended dosage rates.

NOTE - For longer residual control use 1000 m/ TERBUSIEN SUPER 600 SC.

9. <u>Post-emergence application of TERBUSIEN SUPER 600 SC plus Cantron[®] 480 SC plus</u> <u>Bendioxide 480SL plus Villa 51 or Summit Super for the control of Yellow nutsedge and</u> <u>certain broadleaf weeds in maize.</u>

<u>NOTES</u>

- Apply this post-emergence application as a follow up to a pre-emergence application of Cantron[®] 480
 SC in tank mixture with Metolachlor 800 EC or Platinum Plus 915 EC or Leap 840 EC as indicated on the registered labels.
- The adjuvants Villa 51 or Summit Super must be used with all post-emergence applications of Cantron[®] 480 SC plus Bendioxide 480SL as indicated on the registered product labels.
- For optimum control of Nutsedge, apply **TERBUSIEN SUPER 600 SC** plus **Cantron**[®] **480 SC** plus **Bendioxide 480SL** on actively growing Nutsedge under moist conditions, 3 to 5 weeks after planting. Ensure that the application is made after the majority of the Nutsedges have germinated but before flowering. New germination of Nutsedge may occur if application was performed too early. Later applications, when the Nutsedges is in flower, will also give sub-optimal results.
- Refer to the **Bendioxide 480SL** and **Cantron® 480 SC** labels for **USE RESTRICTIONS** and **DIRECTIONS FOR USE**.

Table 8:

	PLUS	PLUS	PLUS Villa 51	
TERBUSIEN SUPER 600 SC 600 to 800 mℓ/ ha	Bendioxide 480SL 2000 m⁄to 2500 m⁄/ ha	Cantron[®] 480 SC 210 to 260 mℓ/ ha	0.1 % OR Summit Super 0.15 to 0.3 %	
WEEDS CONTROLLED THE FOLLOWING WEEDS ARE NORMALLY CONTROLLED AT THE DOSAGE RATE AS INDICATED ABOVE:				
Botanical name		Common n	ame	
Bidens pilosa		Common blackjack		
Cyperus esculentus*		Yellow nutsedge		
Tagetes minuta		Khaki bush		

* Only at highest recommended dosage rates.

NOTE – Consult the **Bendioxide 480SL** labels for additional broadleaf weeds that may also be controlled. - For longer residual control of broadleaf weeds use 1000 m*ℓ* **TERBUSIEN SUPER 600 SC**.

10. Post-emergence tank mixtures with Laurel 800 WDG.

Table 9:

Laurel 800 WDG (g / ha)		
0 to 10 % clay	´	> 10 % clay
18 g		26 g
	PLUS	
TERBUSIEN SUPER 600 SC	0.85 <i>l</i>	0.85 <i>t</i>
OR		
TERBUSIEN SUPER 600 SC	0.85 <i>l</i>	0.85 ℓ
PLUS	PLUS	PLUS
2,4-D Amine 480 SL	0.5 <i>l</i>	0.5 <i>l</i>
OR		
TERBUSIEN SUPER 600 SC	0.85 <i>l</i>	0.85 <i>l</i>
PLUS	PLUS	PLUS
Platinum 960 EC	0.7 <i>l</i>	1.0 <i>e</i>
OR		
TERBUSIEN SUPER 600 SC	0.85 <i>l</i>	0.85 <i>l</i>
PLUS	PLUS	PLUS
Acetochlor 900 EC	0.75 <i>l</i>	1.0 <i>ℓ</i>

Add **Villa 51** or a Villa approved surfactant" to all tank-mixtures at 0.1 % v/v (100 m*l* / 100 litres spray mixture).

Refer to the Laurel 800 WDG, 2,4-D Amine 480 SL, Platinum 960 EC, Acetochlor 900 EC labels for USE **RESTRICTIONS** and **DIRECTIONS FOR USE** and complete list of weeds that are controlled postemergence by abovementioned tank mixtures.

11. Grain sorghum (only post-emergence). Note the following "USE RESTRICTIONS":

Soil type	% Clay	Overall application	Time of application
Light sand / Sandy loam	0 to 20 %	Not rec	commended
Sandy clay loam	21 to 30 %	3.3ℓ/ha	Post-emergence only
Sandy clay loam / Sandy clay	31 to 40 %	4.0ℓ/ha	Post-emergence only
Sandy clay, and soils high in Organic matter	41 to 50 %	4.0 ℓ / ha	Post-emergence only

Table 10: Application rate of TERBUSIEN SUPER 600 SC.

NOTES

TERBUSIEN SUPER 600 SC can only be applied post-emergence if broadleaf weeds have not developed beyond the 4-leaf stage and grasses have not yet emerged, and the grain sorghum has 5 or more leaves. Where grasses have already emerged and broadleaf weeds have developed beyond the 4-leaf stage, these weeds must first be destroyed by cultivation and the product then applied onto clean soil.

Under cold and/or wet conditions TERBUSIEN SUPER 600 SC may damage grain sorghum.

12. Maize and grain sorghum - Post-emergence tank mixtures for the control of broadleaf weeds only with TERBUSIEN SUPER 600 SC plus 2,4-D Amine 480 SL plus Cantron[®] 480 SC (maize only).

This treatment is only recommended in cases where a grass killer has been applied prior to or at the time of planting of maize and grain sorghum. This treatment controls those broad-leaved weeds as mentioned in Table 11 and in addition also Large cocklebur (Xanthium strumarium), Striped wild cucumber (Cucumis myriocarpus), Dubbeltije (Tribulus terrestris), Common morning glory (Ipomoea purpurea) and Ipomoea coscinosperum.

12.1 Maize

Apply:

a) 1.7 litres per hectare TERBUSIEN SUPER 600 SC plus 0.5 litre per hectare 2,4-D Amine 480 SL or

b) 1.3 litres per hectare TERBUSIEN SUPER 600 SC plus 0.75 litre per hectare 2,4-D Amine 480 SL.

IMPORTANT

- Under cold and wet or hot and humid conditions 2,4-D Amine 480 SL may retard the development of prop roots in maize. For this reason, treatment a) above using the low quantity of 2.4-D Amine 480 SL is preferred. Where Bengal wandering Jew (Commelina benghalensis) and Dubbeltije (Tribulus terrestris) forms an important part of the weed spectrum, treatment b) above containing the higher quantity of 2,4-D Amine 480 SL is preferred.
- These weeds must be sprayed early post-emergence e.g., not larger than the 4-leaf stage or 100 mm in height. If application is performed at a late stage, the yield may be reduced due to weed competition. On the other hand, weaker control may result if the weeds are allowed to grow larger. When the maize is taller than 400 mm, a directed spray must be applied, to ensure better coverage.

12.2 Grain sorghum

a) A post-emergence treatment of 1.7 litres per hectare TERBUSIEN SUPER 600 SC plus 0.5 litre per hectare 2,4-D Amine 480 SL can also be used in grain sorghum.

IMPORTANT

- Under hot, humid conditions 2,4-D Amine 480 SL may cause temporary damage in grain sorghum. This damage is normally outgrown and does not affect yield.
- The correct application timing in grain sorghum is 4 to 5 weeks after planting at the 4 to 5-leaf stage and when the plants are approximately 150 mm tall.
- The weeds must be sprayed early post-emergence before exceeding the 4-leaf stage or 100 mm in height.

13.Maize - Control of nutsedges (Cyperus) spp. plus broadleaved weeds in Maize ONLY.
Apply: 1.0 litre per hectare TERBUSIEN SUPER 600 SC plus 50 g per hectare Halo 750 WDG.

NOTES

- Consult the Halo 750 WDG label for more detail.
- Add a Villa approved surfactant or oil adjuvant at the recommended rate or **Break-Thru**[®] at 0.05 % v/v to the spray mixture, as adjuvant.

14. <u>Stale seeded / minimum tillage / stubble mulch.</u>

Where minimum tillage or stubble mulch is practiced, weeds may have emerged at the time of planting. If crops are planted under such conditions or into a stale seed, where grass weeds have already emerged and/or broadleaf weeds have developed beyond the 4-leaf stage, it is recommended that either **Paraquat** or **Metolachlor 800 EC** (for maize) be added to **TERBUSIEN SUPER 600 SC** according to the recommendation of the manufacturer. The **Paraquat** will destroy the emerged weeds and create a preemergence situation for the **TERBUSIEN SUPER 600 SC** or **TERBUSIEN SUPER 600 SC** plus **Metolachlor 800 EC** to act.

IMPORTANT

- When **Paraquat** is added, spraying should be carried out prior to the emergence of the crop, as **Paraquat** will damage the crop if it is applied post-emergence.
- In the case of minimum tillage or stubble mulch, the density of the stubble and humus may affect the efficacy of **TERBUSIEN SUPER 600 SC** or **TERBUSIEN SUPER 600 SC** plus **Metolachlor 800 EC**. Therefore, consult a representative of the manufacturer or distributor.

THE FOLLOWING WEED SPECIES ARE NORMALLY CONTROLLED BY TERBUSIEN SUPER 600 SC:		
Broadleaf weeds:		
Acanthospermum australe	Eight-seeded prostrate starbur	
Acanthospermum glabratum	Five-seeded prostrate starbur	
Acanthospermum hispidum	Upright starbur	
Amaranthus deflexus	Perennial pigweed	
Amaranthus hybridus	Common pigweed	
Amaranthus spinosus	Thorny pigweed	
Amaranthus thunbergii	Red pigweed	
Bidens bipinnata	Spanish blackjack	
Bidens pilosa	Blackjack	
Bidens formosa	Cosmos	
Chenopodium album	White goosefoot	
Chenopodium carinatum	Green goosefoot	
Cleome monophylla	Spindlepod	
Cleome rubella	Pretty lady	
Commelina benghalensis	Bengal wandering Jew	
Crotalaria sphaerocarpa	Mealie Crotalaria	
Datura ferox	Large thorn apple	
Datura stramonium	Thorn apple	
Galinsoga parviflora	Gallant soldier	
Gisekia pharnaceoides	Gisekia	
Hibiscus cannabinus	Kenaf	
Hibiscus trionum	Bladderweed	
Nicandra physaloides	Apple of Peru	
Physalis angulata	Wild gooseberry	
Portulaca oleracea	Purslane	
Richardia brasiliensis	Tropical Richardia	
Schkuhria pinnata	Dwarf marigold	
Tagetes minuta	Khaki weed	
Vigna vexillata	Wild cowpea	

Tabel 11: WEEDS CONTROLLED.

THE FOLLOWING WEED SPECIES ARE NORMALLY CONTROLLED BY TERBUSIEN SUPER 600 SC:		
Grasses:		
Eleusine indica Goose grass		
If dry conditions prevail for a period of 7 to 14 days after pre-emergence application the following		
weed species may not be adequately controlled, especially on heavy soils:		
Cosmos bipinnatus	Cosmos	
Commelina benghalensis	Bengal wandering Jew	
Datura spp. Thorn apple		
Eleusine indica Goose grass		
Under abnormal wet conditions late-season weed control may be inadequate.		

Consult the Metolachlor 800 EC, 2,4-D Amine 480 SL, Campatop 225 EC, Leap 840 EC, Platinum Plus 915 EC, Platinum 960 EC, Nicoron 750 WDG, Bendioxide 480SL, Villa 51, Summit Super, Break-Thru[®], Laurel 800 WDG, Cantron[®] 480 SC and Halo 750 WDG labels for WARNINGS, PRECAUTIONS and DIRECTIONS FOR USE.

The following products mentioned in this label may be replaced with equivalent products:

- METOLACHLOR 800 EC (L 7433) = METOLACHLOR 800 EC (L 7137),
- **PLATINUM PLUS 915 EC** (L 7844 / N-AR 1105) = **METOLACHLOR 915 EC** (L 7841 /W1301418),
- LEAP 840 EC (L 8064 / N-AR 1103 / W1301419) = PREMIUM 840 EC (L 8066) (Acetochlor),
- PLATINUM 960 EC (L 7434 / N-AR 1108) = METOLACHLOR 960 EC (L 7136 / W 130057 / N-AR 1362),
- ACETOCHLOR 900 EC (L 7633 / N-AR 1101 / W1301407) = PREMIUM 900 EC (L 7637),
- CAMPATOP 225 EC (L 5320 / N-AR 1115 / W1301421) = BROMOXYNIL 225 EC (L 4466 / W 130530),
- NICORON 750 WDG (L 8045 / N-AR 1335) = NICOSULFURON 750 WDG (L 8059),
- BENDIOXIDE 480SL (L 7707 / W 130531) = HORNET 480 SL (L 7708 / N-AR 1338 / W1301415),
- LAUREL 800 WDG (L 8061 / N-AR 1339 / W1301422) = FLUMETSULAM 800 WDG (L 8062 / W1301369).
- HALO 750 WDG (L 8283 / N-AR 1337 / W1301403) = CROWN 750 WDG (L 8282) (Halosulfuron),
- CANTRON[®] 480 SC (L 8365 / N-AR 1323 / W 130604) = ASTRON[®] 480 SC (L 8366) = CANONNE 480 SC (L 8735) (Mesotrione),
- VILLA 51 (L 8050 / W 130454 / N-AR 1090) = WEN 51 (L 8315)
- BREAK-THRU[®] (L 6764) = CHARGE (L 9100 / W 130953) = TECHNIWET SUPER (L 9239) and
- SUMMIT SUPER (L 8539) = BENEFIT PLUS (L 8538).

CAMPATOP 225 EC METOLACHLOR 800 EC, VILLA 51, WEN 51, ACETOCHLOR 900 EC, SUMMIT SUPER, PLATINUM PLUS 915 EC, HORNET 480 SL, LEAP 840 EC, PLATINUM 960 EC, NICORON 750 WDG, HALO 750 WDG, LAUREL 800 WDG, CANTRON[®] 480 SC, BENEFIT PLUS, CHARGE and TECHNIWET SUPER are registered products of VILLA CROP PROTECTION (PTY) LTD.

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